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DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

RIN 0648-XC172

Taking of Marine Mammals Incidental to Specified Activities; Construction at Orcas Island and Friday Harbor Ferry Terminals

AGENCY: National Marine Fisheries Service (NMFS), National Oceanic and Atmospheric Administration (NOAA), Commerce.

ACTION: Notice; issuance of an incidental take authorization.

SUMMARY: In accordance with the Marine Mammal Protection Act (MMPA) regulations, notification is hereby given that NMFS has issued an Incidental Harassment Authorization (IHA) to the Washington State Department of Transportation (WSDOT) to take, by harassment, small numbers of 11 species of marine mammals incidental to vibratory pile driving and pile removal activities at the Orcas Island and Friday Harbor ferry terminals in Washington State between September 2013 and February 2014.

DATES: Effective September 1, 2013, through August 31, 2014.

ADDRESSES: Requests for information on the incidental take authorization should be addressed to P. Michael Payne, Chief, Permits and Conservation Division, Office of Protected Resources, National Marine Fisheries Service, 1315 East-West Highway, Silver Spring, MD 20910. A copy of the application containing a list of the references used in this document, NMFS' Environmental Assessment (EA), Finding of No Significant Impact (FONSI), and the IHA may be obtained by writing to the address specified above

or visiting the Internet at:

<http://www.nmfs.noaa.gov/pr/permits/incidental.htm#applications>.

Documents cited in this notice may be viewed, by appointment, during regular business hours, at the aforementioned address.

FOR FURTHER INFORMATION CONTACT: Shane Guan, Office of Protected Resources, NMFS, (301) 427-8401.

#### SUPPLEMENTARY INFORMATION:

##### Background

Sections 101(a)(5)(A) and (D) of the MMPA (16 U.S.C. 1361 *et seq.*) direct the Secretary of Commerce to allow, upon request, the incidental, but not intentional, taking of small numbers of marine mammals by U.S. citizens who engage in a specified activity (other than commercial fishing) within a specified geographical region if certain findings are made and either regulations are issued or, if the taking is limited to harassment, a notice of a proposed authorization is provided to the public for review.

An authorization for incidental takings shall be granted if NMFS finds that the taking will have a negligible impact on the species or stock(s), will not have an unmitigable adverse impact on the availability of the species or stock(s) for subsistence uses (where relevant), and if the permissible methods of taking and requirements pertaining to the mitigation, monitoring and reporting of such takings are set forth. NMFS has defined "negligible impact" in 50 CFR 216.103 as "...an impact resulting from the specified activity that cannot be reasonably expected to, and is not reasonably likely to, adversely affect the species or stock through effects on annual rates of recruitment or survival."

Section 101(a)(5)(D) of the MMPA established an expedited process by which citizens of the U.S. can apply for a one-year authorization to incidentally take small numbers of marine mammals by harassment, provided that there is no potential for serious injury or mortality to result from the activity. Section 101(a)(5)(D) establishes a 45-day time limit for NMFS review of an application followed by a 30-day public notice and comment period on any proposed authorizations for the incidental harassment of marine mammals. Within 45 days of the close of the comment period, NMFS must either issue or deny the authorization.

#### Summary of Request

On May 25, 2012, WSDOT submitted a request to NOAA requesting an IHA for the possible harassment of small numbers of 11 marine mammal species incidental to construction associated with the replacement of dolphin structures at the Orcas Island and Friday Harbor ferry terminals in Washington State. On July 20, WSDOT submitted a revised IHA application. The action discussed in this document is based on WSDOT's July 20, 2012, IHA application.

#### Description of the Specified Activity

Detailed description of the WSDOT's dolphin replacement work at the Orcas Island and Friday Harbor ferry terminals is provided in the Federal Register notice for the proposed IHA (78 FR 9373; February 8, 2013). Since that time, no changes have been made to the dolphin replacement project at Orcas Island and Friday Harbor ferry terminals, except that WSDOT requested the incidental take coverage to be extended from February 28, 2014, through August 31, 2014, in case the project may be postponed. Nevertheless, the amount of activity and the duration of actual in-water construction has

not changed. The potential change in work season will not affect marine mammal take estimates since the actual construction duration will not change and the initial calculation relied on marine mammal presence in the project area on annual basis.

The details of WSDOT's dolphin replacement work at Orcas Island and Friday Harbor ferry terminals are provided in the Federal Register notice for the proposed IHA (78 FR 9373; February 8, 2013). Please refer to that Federal Register notice for the description of the specific activity.

#### Comments and Responses

A notice of NMFS' proposal to issue an IHA to WSDOT was published in the Federal Register on February 8, 2013 (78 FR 9373). That notice described, in detail, WSDOT's activity, the marine mammal species that may be affected by the activity, and the anticipated effects on marine mammals. During the 30-day public comment period, NMFS received comments from the Marine Mammal Commission (Commission) and the Aquatic Research and Monitoring (ARM). The Commission recommends NMFS issue the IHA to WSDOT, but has asked NMFS to condition the IHA in certain respects. Specific comments and responses are provided below.

Comment 1: The Commission requests that NMFS justify its conclusion that the taking will involve only a small number of southern resident killer whales (SRKWs) and work with the Fish and Wildlife Service and the Commission to develop a policy that sets forth the criteria and/or thresholds for determining what constitutes "small numbers" and "negligible impact" for the purpose of authorizing incidental takes of marine mammals

Response: As stated in the Federal Register for the proposed IHA, WSDOT is required to implement power-down and/or shutdown measures if the combined Level B

takes of SRKW reach to a total of 16 at both Orcas Island and Friday Harbor ferry terminals, which is equivalent to approximately 19% of the SRKW population. Historical sighting data of SRKW in and around the action area reveals that relatively few animals are likely to be within the immediate vicinity of the terminals; thus, NMFS expects that actual take of SRKW by Level B harassment will be lower than the modeled estimate of 16 animals (WSDOT 2012). In addition, we expect marine mammals will avoid areas of high intensity noise, thereby supporting our conclusion that the take of 19% of this population is unlikely. Further, as discussed in the Federal Register notice for the proposed IHA (78 FR 9373; February 8, 2013) and later in this document, the anticipated take would be low-intensity noise exposure for a brief time period during vibratory pile driving and pile removal. Any animals exposed to sound from the construction activities would exhibit no more than low-level behavioral disturbances and vacate the area temporarily. As we have done in the past, NMFS will continue to collaborate with the Commission and Fish and Wildlife Service on a variety of MMPA issues, including small numbers and negligible impact, to strengthen our collective understanding of how activities affect marine mammal species and stocks.

Comment 2: The Commission requests NMFS require WSDOT to monitor the Level B harassment zone at least 30 minutes before, during, and 30 minutes after the pile-removal and -driving activities to ensure that those activities are not having an unintended effect on marine mammals in or near the zone.

Response: NMFS agrees with the Commission and will require the WSDOT to monitor the Level B harassment zone for 30 minutes before, during, and 30 minutes after the pile driving and pile removal activities.

Comment 3: The Commission requests NMFS specify in its authorization that, after a delay, power down, or shutdown, the Ferries Division would not resume activities until the marine mammal (1) is observed to have left the Level B harassment zone or (2) has not been seen or otherwise detected within the Level B harassment zone for 15 minutes for small odontocetes and 30 minutes for mysticetes and large odontocetes, including killer whales.

Response: As described in detail in the Federal Register notice in the proposed IHA (78 FR 9373; February 8, 2013), WSDOT's dolphin replacement projects at Orcas Island and Friday Harbor ferry terminals will only use vibratory pile hammer for pile driving. Marine mammals are not expected to be injured (Level A harassment) by WSDOT's use of vibratory pile hammers, thereby obviating the need for an exclusion zone for this activity. Nevertheless, for initiation of pile driving and pile removal activities, WSDOT is required to monitor the Level B harassment zone for 30 minutes before, during, and 30 minutes after in-water construction, and to ramp up vibratory hammer for pile removal and pile driving, which will effectively reduce any startle behavior of marine mammals in the vicinity at the commencement of the piling activity.

However, WSDOT will be required to power down or shutdown when the potential takes of SRKWs is approaching to the allotted take limit. Therefore, under such circumstances, NMFS requires that WSDOT not resume activities until the killer whale (1) is observed to have left the Level B harassment zone or (2) has not been seen or otherwise detected within the Level B harassment zone 30 minutes after a power down or shutdown.

Comment 4: ARM comments that vessels used in marine mammal monitoring need to be of large size and have an observation platform that sit at least 8-10 ft off the water, and ideally there should be two vessels for monitoring, one at each end of the channel. And this two vessel scenario can replace the need for a land-based PSO.

Response: Although the commenter raises a good point, it is worthwhile to note that large vessels and the use of multiple vessels produce higher underwater sound levels than a single small vessel. In this particular situation, where the ZOI is not particularly big, there would be no added benefit to introducing multiple and larger vessels to facilitate marine mammal observation and it could result in unintended consequences, e.g., there would be more disturbances to marine life as larger and more vessels will contribute more noise underwater. Thus, we have determined that one small vessel and one land-based PSO will be able to monitor the zones effectively.

#### Description of Marine Mammals in the Area of the Specified Activity

The marine mammal species under NMFS jurisdiction most likely to occur in the construction area include Pacific harbor seal (*Phoca vitulina richardsi*), California sea lion (*Zalophus californianus*), northern elephant seal (*Mirounga angustirostris*), Steller sea lion (*Eumetopias jubatus*), harbor porpoise (*Phocoena phocoena*), Dall's porpoise (*Phocoenoides dalli*), Pacific white-sided dolphin (*Lagenorhynchus obliquidens*), killer whale (*Orcinus orca*), gray whale (*Eschrichtius robustus*), humpback whale (*Megaptera novaeangliae*), and minke whale (*Balaenoptera acutorostris*).

General information on the marine mammal species found in California waters can be found in Caretta et al. (2011), which is available at the following URL: <http://www.nmfs.noaa.gov/pr/pdfs/sars/po2011.pdf>. Specific information concerning

these species in the vicinity of the action area is provided in the Federal Register notice for the proposed IHA (78 FR 9373; February 8, 2013) and in WSDOT's IHA application. Therefore, it is not repeated here.

#### Potential Effects of the Specified Activity on Marine Mammals

The effects of underwater noise from in-water vibratory pile driving and pile removal associated with the construction activities at Orcas Island and Friday Harbor ferry terminals has the potential to result in behavioral harassment of marine mammal species and stocks in the vicinity of the action area. The Notice of Proposed IHA (78 FR 9373; February 8, 2013) included a discussion of the effects of anthropogenic noise on marine mammals, which is not repeated here. No instances of hearing threshold shifts, injury, serious injury, or mortality are expected as a result of WSDOT's activities given the strong likelihood that marine mammals would avoid the immediate vicinity of the pile driving area.

#### Potential Effects on Marine Mammal Habitat

The primary potential impacts to marine mammals and other marine species are associated with elevated sound levels, but the project may also result in additional effects to marine mammal prey species and short-term local water turbidity caused by in-water construction due to pile removal and pile driving. These potential effects are discussed in detail in the Federal Register notice for the proposed IHA (78 FR 9373; February 8, 2013) and are not repeated here.

#### Potential Impacts on Availability of Affected Species or Stock for Taking for Subsistence Uses

No subsistence harvest of marine mammals occur in the action area.



## Mitigation Measures

In order to issue an incidental take authorization under Section 101(a)(5)(D) of the MMPA, NMFS must prescribe, where applicable, the permissible methods of taking pursuant to such activity, and other means of effecting the least practicable adverse impact on such species or stock and its habitat, paying particular attention to rookeries, mating grounds, and areas of similar significance, and on the availability of such species or stock for taking for certain subsistence uses.

For WSDOT's dolphin replacement work at Orcas Island and Friday Harbor ferry terminals, NMFS is requiring WSDOT to implement the following mitigation measures to minimize the potential impacts to marine mammals in the project vicinity as a result of the in-water construction activities.

Since the measured source levels (at 10 and 16 m) of the vibratory hammer involved in pile removal and pile driving are below NMFS' current thresholds for Level A takes, i.e., below 180 dB re 1  $\mu$ Pa (rms), no exclusion zone will be established, and there will be no required power-down and shutdown measures except when take of SRKWs approaches to the limit authorized (see below). Instead, WSDOT is required to establish and monitor the 120 dB re 1  $\mu$ Pa (rms) zone of influence (ZOI, see below Monitoring and Reporting section).

One major mitigation measure for WSDOT's pile removal and pile driving activities is ramping up, or soft start, of vibratory pile hammers. The purpose of this procedure is to prevent the startling behavior of marine mammals in the vicinity of the construction activity from sudden loud noise.

Soft start requires contractors to initiate the vibratory hammer at reduced power for 15 seconds with a 1 minute interval, and repeat such procedures for an additional two times.

In addition, monitoring for marine mammal presence will take place 30 minutes before, during and 30 minutes after pile driving to document marine mammal occurrence and responses before, during and after the pile driving and pile removal activities (see Monitoring and Reporting section below).

Further, if the number of allotted SRKW takes (see Estimated Take by Incidental Harassment section below) reaches the limit under the IHA , WSDOT will implement shutdown and power down measures if such species/stock of animal approaches the 120 dB Level B harassment zone.

Finally, to avoid exceeding its SRKW take limit, NMFS has required WSDOT to not resume activities until any SRKW (1) is observed to have left the Level B harassment zone or (2) has not been seen or otherwise detected within the Level B harassment zone 30 minutes.

#### Mitigation Conclusions

Based on our evaluation of the prescribed mitigation measures, NMFS has determined the measures provide the means of effecting the least practicable impact on marine mammal species or stocks and their habitat, paying particular attention to rookeries, mating grounds, and areas of similar significance.

#### Monitoring and Reporting

#### Monitoring Measures

Any ITA issued under Section 101(a)(5)(D) of the MMPA is required to prescribe, where applicable, “requirements pertaining to the monitoring and reporting of such taking”. The MMPA implementing regulations at 50 CFR 216.104 (a)(13) state that requests for ITAs must include the suggested means of accomplishing the necessary monitoring and reporting that will result in increased knowledge of the species and of the level of taking or impacts on populations of marine mammals that are expected to be present in the action area.

(1) Protected Species Observers (PSOs)

WSDOT will employ qualified protected species observers (PSOs) to monitor the 120 dB re 1  $\mu$ Pa (rms) for marine mammals. Qualifications for marine mammal observers include:

- Visual acuity in both eyes (correction is permissible) sufficient for discernment of moving targets at the water’s surface with ability to estimate target size and distance. Use of binoculars may be necessary to correctly identify the target.
- Advanced education in biological science, wildlife management, mammalogy or related fields (Bachelors degree or higher is preferred), but not required.
- Experience or training in the field identification of marine mammals (cetaceans and pinnipeds).
- Sufficient training, orientation or experience with the construction operation to provide for personal safety during observations.

- Ability to communicate orally, by radio or in person, with project personnel to provide real time information on marine mammals observed in the area as necessary.
- Experience and ability to conduct field observations and collect data according to assigned protocols (this may include academic experience).
- Writing skills sufficient to prepare a report of observations that would include such information as the number and type of marine mammals observed; the behavior of marine mammals in the project area during construction, dates and times when observations were conducted; dates and times when in-water construction activities were conducted; and dates and times when marine mammals were present at or within the defined ZOI.

## (2) Monitoring Protocols

PSOs will be present on site at all times during pile removal and driving. Marine mammal behavior, overall numbers of individuals observed, frequency of observation, and the time corresponding to the daily tidal cycle will be recorded.

The following protocols will be used for marine mammal monitoring during Orcas Island and Friday Harbor ferry terminal construction work:

- A range finder or hand-held global positioning system device will be used to ensure that the 120 dB re 1  $\mu$ Pa (rms) Level B behavioral harassment ZOI is monitored.
- A 20-minute pre-construction marine mammal monitoring period will be required before the first pile driving or pile removal of the day. A 30-minute post-construction marine mammal monitoring period will be required after the

last pile driving or pile removal of the day. If the construction personnel take a break between subsequent pile driving or pile removal for more than 30 minutes, then additional pre-construction marine mammal monitoring will be required before the next start-up of pile driving or pile removal.

- If marine mammals are observed, the following information will be documented:
  - Species of observed marine mammals;
  - Number of observed marine mammal individuals;
  - Behavioral of observed marine mammals;
  - Location within the ZOI; and
  - Animals' reaction (if any) to pile-driving activities.
- During vibratory pile removal and driving, one land-based biologist will monitor the area from the terminal work site, and one boat with a qualified PSO shall navigate the ZOI in a circular path.
- In addition, WSDOT will contact the Orca Network and/or Center for Whale Research to determine the location of the nearest marine mammal sightings. Sightings are called or emailed into the Orca Network and immediately distributed to other sighting networks including: the Northwest Fisheries Science Center of NOAA Fisheries, the Center for Whale Research, Cascadia Research, the Whale Museum Hotline, and the British Columbia Sightings Network.
- Marine mammal occurrence information collected by the Orca Network also includes detection by the following hydrophone systems: (1) The SeaSound Remote Sensing Network, a system of interconnected hydrophones installed

in the marine environment of Haro Strait (west side of San Juan Island) to study killer whale communication, underwater noise, bottomfish ecology, and local climatic conditions, and (2) A hydrophone at the Port Townsend Marine Science Center that measures average underwater sound levels and automatically detects unusual sounds.

- Finally, after a delay, power down, or shutdown, each of which is designed to prevent WSDOT from exceeding its SRKW take limits, WSDOT will not resume activities until the SRKW (1) is observed to have left the Level B harassment zone or (2) has not been seen or otherwise detected within the Level B harassment zone 30 minutes.

NMFS has determined that these monitoring measures are adequate, particularly as it relates to assessing the level of taking or impacts to affected species. The land-based PSO is expected to be positioned in a location that will maximize his/her ability to detect marine mammals and will also utilize binoculars to improve detection rates. In addition, the boat-based PSO will cruise within the 120 dB ZOI, which is not a particularly large zone, thereby allowing him/her to conduct additional monitoring with binoculars. With respect to WSDOT's take limits, NMFS is primarily concerned that WSDOT could reach its Southern Resident killer whale limit. However, killer whales have large dorsal fins and can be easily spotted from great distances. Further, Southern Resident killer whales typically move in groups which makes visual detection much easier. In addition, added underwater acoustic monitoring by Orca Network in the region would further provide additional detection, since resident killer whales are very vocal.

#### Reporting Measures

WSDOT will provide NMFS with a draft monitoring report within 90 days of the conclusion of the construction work. This report will detail the monitoring protocol, summarize the data recorded during monitoring, and estimate the number of marine mammals that may have been harassed.

If comments are received from the NMFS Northwest Regional Administrator or NMFS Office of Protected Resources on the draft report, a final report will be submitted to NMFS within 30 days thereafter. If no comments are received from NMFS, the draft report will be considered to be the final report.

#### Notification of Injured or Dead Marine Mammals

In addition to the reporting measures listed above, NMFS will require that WSDOT notify NMFS' Office of Protected Resources and NMFS' Stranding Network of sighting an injured or dead marine mammal in the vicinity of marine operations. Depending on the circumstance of the incident, WSDOT shall take one of the following reporting protocols when an injured or dead marine mammal is discovered in the vicinity of the action area.

(a) In the unanticipated event that the construction activities clearly cause the take of a marine mammal in a manner prohibited by this Authorization, such as an injury, serious injury or mortality (e.g., ship-strike, gear interaction, and/or entanglement), WSDOT shall immediately cease all operations and immediately report the incident to the Supervisor of Incidental Take Program, Permits and Conservation Division, Office of Protected Resources, NMFS, and the Northwest Regional Stranding Coordinators. The report must include the following information:

(i) time, date, and location (latitude/longitude) of the incident;

- (ii) description of the incident;
- (iii) status of all sound source use in the 24 hours preceding the incident;
- (iv) environmental conditions (e.g., wind speed and direction, Beaufort sea state, cloud cover, visibility, and water depth);
- (v) description of marine mammal observations in the 24 hours preceding the incident;
- (vi) species identification or description of the animal(s) involved;
- (vii) the fate of the animal(s); and
- (viii) photographs or video footage of the animal (if equipment is available).

Activities shall not resume until NMFS is able to review the circumstances of the prohibited take. NMFS shall work with WSDOT to determine what is necessary to minimize the likelihood of further prohibited take and ensure MMPA compliance. WSDOT may not resume their activities until notified by NMFS via letter, email, or telephone.

(b) In the event that WSDOT discovers an injured or dead marine mammal, and the lead PSO determines that the cause of the injury or death is unknown and the death is relatively recent (i.e., in less than a moderate state of decomposition as described in the next paragraph), WSDOT will immediately report the incident to the Supervisor of the Incidental Take Program, Permits and Conservation Division, Office of Protected Resources, NMFS, and the Northwest Regional Stranding Coordinators. The report must include the same information identified above. Activities may continue while NMFS reviews the circumstances of the incident. NMFS will work with WSDOT to determine whether modifications in the activities are appropriate.



(c) In the event that WSDOT discovers an injured or dead marine mammal, and the lead PSO determines that the injury or death is not associated with or related to the activities authorized in the IHA (e.g., previously wounded animal, carcass with moderate to advanced decomposition, or scavenger damage), WSDOT shall report the incident to the Supervisor of the Incidental Take Program, Permits and Conservation Division, Office of Protected Resources, NMFS, and the Northwest Regional Stranding Coordinators, within 24 hours of the discovery. WSDOT shall provide photographs or video footage (if available) or other documentation of the stranded animal sighting to NMFS and the Marine Mammal Stranding Network. WSDOT can continue its operations under such a case.

#### Estimated Take by Incidental Harassment

As mentioned in the Federal Register notice for the proposed IHA (78 FR 9373; February 8, 2013), a worst-case scenario for the Orcas Island ferry terminal project assumes that it may take 3 days to remove the existing piles and 2 days to install the new piles. The maximum total number of hours of pile removal activity is about 17.2 hours, and pile-driving activity is about 2.3 hours (averaging about 3.9 hours of active pile removal/driving for each construction day).

A worst-case scenario for the Friday Harbor ferry terminal project assumes that it may take 5 days to remove the existing piles and 5 days to install the new piles. The maximum total number of hours of pile removal activity is about 34.75 hours, and pile-driving activity is about 4.3 hours (averaging about 3.9 hours of active pile removal/driving for each construction day).

Also, as described in the Federal Register notice for the proposed IHA (78 FR 9373; February 8, 2013), for non-impulse noise, NMFS uses 120 dB re 1  $\mu$ Pa (rms) as the threshold for Level B behavioral harassment. The distance to the 120 dB re 1  $\mu$ Pa (rms) isopleth due to vibratory pile driving for the Orcas Island ferry terminal project extends a maximum of 3.5 km (2.2 miles) before land is intersected. For the Friday Harbor ferry terminal project, land is intersected at a maximum of 4.7 km (2.9 miles). To simplify the establishment of the 120 dB re 1  $\mu$ Pa (rms) zone of influence (ZOI) for monitoring, vibratory timber pile removal is assumed to extend the same distances as vibratory pile driving. Both of these areas will be monitored during construction to estimate actual harassment take of marine mammals (see below).

Airborne noises can affect pinnipeds, especially resting seals hauled out on rocks or sand spits. The airborne 90 dB re 20  $\mu$ Pa Level B threshold for hauled out harbor seals was estimated at 37 m, and the airborne 100 dB Level B re 10  $\mu$ Pa threshold for all other pinnipeds is estimated at 12 m. This is much closer than the distance to the nearest harbor seal haulout site for the Orcas Island ferry terminal (1 km) and Friday Harbor ferry terminal (4 km).

Incidental take is estimated for each species by estimating the likelihood of a marine mammal being present within a ZOI during active pile driving and removal. Expected marine mammal presence is determined by past observations and general abundance near the Orcas Island and Friday Harbor ferry terminals during the construction window. Typically, potential take is estimated by multiplying the number of animals likely to be present in the action area by the estimated number of days pile removal and pile driving would be conducted. Since there are no density estimates for

any Puget Sound population of marine mammal, the number of marine mammals present is estimated using local marine mammal data sets (e.g., Orca Network, state and federal agencies), opinions from state and federal agencies, incidental observations from WSDOT biologists, and the duration for the vibratory pile removal and pile driving activities. Based on the estimates, approximately 150 Pacific harbor seals, 25 California sea lions, 15 northern elephant seals, 25 Steller sea lions, 50 harbor porpoises, 15 Dall's porpoises, 15 Pacific white-sided dolphins, 32 killer whales (24 transient, 8 Southern Resident killer whales), 4 gray whales, 4 humpback whales, and 10 minke whales could be exposed to received noise levels above 120 dB re 1  $\mu$ Pa (rms) from the dolphin replacement work at the Orcas Island ferry terminal. In addition, approximately 200 Pacific harbor seals, 50 California sea lions, 30 northern elephant seals, 50 Steller sea lions, 100 harbor porpoises, 30 Dall's porpoises, 30 Pacific white-sided dolphins, 32 killer whales (24 transient, 8 Southern Resident killer whales), 4 gray whales, 4 humpback whales, and 10 minke whales could be exposure to received noise levels above 120 dB re 1  $\mu$ Pa (rms) from the dolphin replacement work at the Friday Harbor ferry terminal. A summary of the estimated takes is presented in Table 1.

**Table 1. Estimated numbers of marine mammals that may be exposed to received pile driving and pile removal levels above 120 dB re 1  $\mu$ Pa (rms)**

Species	Orcas Island Ferry Terminal	Friday Harbor Ferry Terminal	Total
Pacific harbor seal	150	200	350
California sea lion	25	50	75
Northern elephant seal	15	30	45
Steller sea lion	25	50	75
Harbor porpoise	50	100	150
Dall's porpoise	15	30	45
Pacific white-sided dolphin	15	30	45
Killer whale, transient	24	24	48
Killer whale, Southern Resident	8	8	16
Gray whale	4	4	8
Humpback whale	4	4	8
Minke whale	10	10	20

The takes represent 2.4% of the Inland Washington stock of harbor seals (estimated at 14,612), 0.03% of the U.S. stock California sea lion (estimated at 296,750), 0.04% of the California stock northern elephant seal (estimated at 124,000), 0.15% of the eastern stock Steller sea lion (estimated at 48,519), 1.4% of the Washington Inland waters stock harbor porpoise (estimated at 10,682), 0.08% of the California, Oregon, and Washington stock Dall's porpoise (estimated at 57,549), 0.18% of the California, Oregon, and Washington stock Pacific white-sided dolphin (estimated at 25,233), 13.6% of the West Coast transient killer whale (estimated at 354), 19.0% of Southern Resident killer whale (estimated at 84), 0.02% of the Eastern North Pacific stock gray whale (estimated at 26,000), 0.7% of the Eastern North Pacific stock humpback whale (estimated at 1,100), and 4% of the California/Oregon/Washington stock minke whale (estimated at 500).

#### Negligible Impact and Small Numbers Analysis and Determination

Pursuant to NMFS' regulations implementing the MMPA, an applicant is required to estimate the number of animals that will be "taken" by the specified activities (i.e., takes by harassment only, or takes by harassment, injury, and/or death). This estimate informs the analysis that NMFS must perform to determine whether the take resulting from the activity will have a "negligible impact" on the species or stock. Level B (behavioral) harassment occurs at the level of the individual(s) and does not assume any resulting population-level consequences, though there are known avenues through which behavioral disturbance of individuals can result in population-level effects. A negligible impact finding is based on the lack of likely adverse effects on annual rates of recruitment or survival (i.e., population-level effects). An estimate of the number of

Level B harassment takes alone is not enough information on which to base an impact determination.

In addition to considering estimates of the number of marine mammals that might be “taken” through behavioral harassment, NMFS considers other factors, such as the likely nature of any responses (their intensity, duration, etc.), the context of any responses (critical reproductive time or location, migration, etc.), as well as the number and nature of estimated Level A takes, the number of estimated mortalities, and effects on habitat.

The WSDOT’s Orcas Island and Friday Harbor ferry terminal construction projects would conduct vibratory pile removal and pile driving to replace dolphin structures. Elevated underwater noises are expected to be generated as a result of pile removal and pile driving activities. However, noise levels from the machinery and activities are not expected to reach to the level that may cause TTS, injury (PTS included), or mortality to marine mammals. Therefore, NMFS does not expect that any animals would experience Level A harassment or Level B harassment in the form of TTS from being exposed to in-water pile driving and pile removal associated with WSDOT construction project. Although the construction window has been extended to August 31, 2014 to allow for possible delays in work, the actual duration of in-water construction will remain the same. In addition, marine mammal occurrence, behavior, and distribution patterns have been factored within the initial analyses, therefore there will be no change in the effects during the six months window.

Based on long-term marine mammal monitoring and studies in the vicinity of the construction areas, it is estimated that a total of approximately 350 Pacific harbor seals, 75 California sea lions, 45 northern elephant seals, 75 Steller sea lions, 150 harbor

porpoises, 45 Dall's porpoises, 45 Pacific white-sided dolphins, 64 killer whales, 8 gray whales, 8 humpback whales, and 20 minke whales could be exposure to received noise levels above 120 dB re 1  $\mu$ Pa (rms) from the construction work at Orcas Island and Friday Harbor ferry terminals. These numbers represent approximately 0.03% - 19.0% of the stocks and populations of these species could be affected by Level B behavioral harassment. As mentioned earlier in this document, the worst case scenario for the construction work would only take a total of 5 days at Orcas Island ferry terminal and 10 days at the Friday Harbor ferry terminal.

In addition, these low intensity, localized, and short-term noise exposures (i.e., 120 dB re 1  $\mu$ Pa (rms) from vibratory pile removal and pile driving for a total of 15 days) are expected to cause brief startle reactions or short-term behavioral modification by the animals. These brief reactions and behavioral changes are expected to disappear when the exposures cease. In addition, no important feeding and/or reproductive areas of marine mammals is known to be near the action area. Therefore, these levels of received underwater construction noise from the Orcas Island and Friday Harbor ferry terminal construction projects are not expected to affect marine mammal annual rates of recruitment or survival. The maximum estimated 120 dB maximum isopleths from vibratory pile driving is approximately 3.5 km at Orcas Island and 4.7 km at Friday Harbor from the pile before being blocked by landmass, respectively.

The nearest known haulout site to the Orcas Island ferry terminal is 1 km away south of the terminal offshore of Shaw Island, and 4 km northeast of the Friday Harbor ferry terminal offshore of Shaw Island. However, it is estimated that airborne noise from pile driving and removal would fall below 90 dB and 100 dB re 1  $\mu$ Pa at 37 m and 12 m

from the pile, respectively. Therefore, pinnipeds hauled out on Shaw Island will not be affected.

For the reasons discussed in this document, NMFS has determined that the impact of vibratory pile removal and pile driving associated with dolphin replacements at Orcas Island and Friday Harbor ferry terminals would result, at worst, in the Level B harassment of small numbers of 11 marine mammals that inhabit or visit the area. While behavioral modifications, including temporarily vacating the area around the construction site, may be made by these species to avoid the resultant visual and acoustic disturbance, the availability of alternate areas within Washington coastal waters and haul-out sites has led NMFS to determine that this action will have a negligible impact on these species in the vicinity of the construction area.

In addition, no take by TTS, Level A harassment (injury) or death is anticipated and harassment takes should be at the lowest level practicable due to incorporation of the mitigation and monitoring measures mentioned previously in this document.

#### National Environmental Policy Act (NEPA)

NMFS prepared an Environmental Assessment (EA) and analyzed the potential impacts to marine mammals that would result from WSDOT's dolphin replacement work at Orcas Island and Friday Harbor ferry terminals. A Finding of No Significant Impact (FONSI) was signed on April 16, 2013. A copy of the EA and FONSI is available upon request (see ADDRESSES).

#### Endangered Species Act (ESA)

The humpback whale, Southern Resident stock of killer whale, and the eastern population of Steller sea lions, are the only marine mammal species currently listed under

the ESA that could occur in the vicinity of WSDOT's construction projects. NMFS' Permits and Conservation Division consulted with NMFS' Northwest Regional Office Division of Protected Resources under section 7 of the ESA on the issuance of an IHA to WSDOT under section 101(a)(5)(D) of the MMPA for this activity. A Biological Opinion was issued on February 13, 2013, which concludes that issuance of the IHA is not likely to jeopardize the continued existence of the ESA-listed marine mammal species. NMFS will issue an Incidental Take Statement under this Biological Opinion which contains reasonable and prudent measures with implementing terms and conditions to minimize the effects of take of listed species.

#### Authorization

NMFS has issued an IHA to WSDOT for the potential harassment of small numbers of 11 marine mammal species incidental to dolphin replacement construction activities at the Orcas Island and Friday Harbor ferry terminals in Washington State, provided the previously mentioned mitigation, monitoring, and reporting requirements are incorporated.

Dated: April 18, 2013.

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